Monkur

Lecture 3d
Yellow fever

Lecture 38.

Remitting yellow fever. continued

Treatment

Having treated in the two last discourses, the symptomatology, Diagnosis, Prognosis, Mortality and the nature of Remitting Yellow fever, I shall close the subject with the present investigation of the treatment of the disease.

Before, however, we enter upon this consideration, we shall have to acknowledge that our advancement, within the present century, towards any thing like a satisfactory mode of treatment of the disease, in its malignant and formidable character, has been sadly disproportionate to the degree of talent which it has claimed within this time by the most eminent of the profession in different countries. Even with respect to those forms in which the symptoms, though formidable, are comparatively less intense, it seems very difficult to draw, from a review of what has been done by many practitioners, fixed rules for our guidance on certain points of practice. The difference in the statements of respectable authorities re=garding the efficacy of a particular plan of treatment can indeed be not otherwise explained than by admitting that in some epidemics of the fever very remarkable peculiarities had occurred. Indeed, it is of the highest importance that you should every recollect the influences which epidemical states of atmosphere has in the production of different modifications

of the disease many of which appear positively opposite to that of others. It is in our opinion, that those influences of the Epidemical constitution, which gives to the disease in question its peculiar malignancy; but what are the precise nature of these influences has to this time never been definely ascertained; hypotheses upon hypothesis have been offered, but not as yet amounted to certain theory. If we consider the different forms of Yellow fever brought to the notice of the practitioner by the greater or less intensity of this peculiar principle referred to, upon the organic economy, we may be able to explain the discrepances observable in the treatment of the disease. On our first acquaintance with Yellow fever cases, no agent would seem more evidently indicated than general blood letting when the excitement runs high; but we have too often found that after its employment, even but in a limited extent, the true character of the fever had been masked, and that after its abstraction, the patient was found to require all the strength which had been taken from him by the venesection. Frequently in the formidable variety of the fever, we may take blood from the arm, under a strong impression that a highly inflammatory action was present; but never in a single instance has the blood, presented a buffy surface with a firm coagulum; on the contrary we have found a loose mass, yeilding readily to the pressure of the finger, the seperation of the serum being imperfectly or not at all. Some authorities tells us they have employed general blood letting in Yellow fever, with advantageous effects; but without any intention to impugn the statements respecting the advantages derived from free copious blood letting in some epidemics in this country & West Indies, I must declare that the weight of evidence, and my own experience, is against its

general adoption in yellow fever, even where the cases seem to indicate its propriety. That the practice pursued in this fever in different countries, and the same countries at different times, must be dissimilar, if judiciously chosen, none of you can doubt; for the same disease, I wish you to recollect when epidemic at different periods and under different circumstances of climate, constitutions of the people, seasons &c is wont to assume very different characters, and necessary to demand corresponding difference of treatment. It is only by keeping in view these principles that the practitioner can be ~~ever~~ very successful and meet the varying modifications of this disease. Again let me warn you on the onset in the treatment of this disease, to beware of the general direction found in many of your books, that is, if yellow fever, bloodletting should be instantly and copiously adopted; for such and such authority say they have found ~~it~~ it their sheet anchor & best remedy in the treatment of this fever. It is the bounden duty of the practitioner owes to his patient and to his own peace of mind and reputation, to acquaint himself with as far as practicable, the general character of the disease, its possible influences from seasons &c. To act in ~~your~~ his first cases with utmost caution; to recollect well the observation of the English Hippocrates, Sydenham, whether "that after having killed two or three patients in the commencement of an Epidemic fever, he went right, and not until then". Therefore, gentlemen, a doctor no particular or specific treatment hastily; grope along cautiously until you have found the actual state of circumstances, then you may proceed with better prospects of success. Far better, if your way is not clear, to leave your patient to nature; to her principle of conservation than needless and ~~to~~ dangerous interferences

It was formerly, more than at present, that physicians prescribed for the name of a disease, neglecting the varieties of type and character which it presents; but it is sufficient to mention the modifications of small pox and scarlet fever to prove the error of such sweeping rules of treatment. Between the mild distinct small pox, and the confluent or virulent small pox, there is hardly any analogy in a practical point of view; and the simple scarlet fever, which is scarcely a disease, if the busy hand of art does not interfere with it, and malignant scarlet fever with ulcerated sore throat; the practical difference is as wide as possible, yet they are the same disease. In like manner, may we illustrate the difference of treatment in the different varieties of yellow fever; when the disease occurs among the natives of hot climates; a more severe remitting fever, among the emigrants from northern latitudes; or the people of countries where a tropical degree of heat is only casual; or where from the intensity of the cause every organ in its functional duty is at once suspended; in all these the fever, assumes a form varied in point of severity and fatality; not again to mention, the varieties of form, according to the different epidemic and atmospherical constitutions, so termed by Eclectic, the cause again of these we cannot explain.

Thus, in one epidemic season, the inflammatory symptoms, or morbid excitement may run high; in another, in consequence of the failure of the vital powers, from general organic congestion and suspended secretion, may be more prevalent; each of these states will certainly require material modifications of treatment ~~[illegible]~~ ~~to give here all the chance he may to save his patient~~.

Perhaps, gentlemen, these remarks may prove hereafter of essential service to you, in the consideration and management of these circumstances, and enable you better to receive

the different hypothetical notions which various writers adopt, and which may enable you to explain to your own satisfaction, why the dissimilarity and the general want of success, in the treatment of yellow fever. In your Elementary practical works are described three opposite modes of practice; the one founded upon the idea that the disease was highly putrid; the second that it was of an inflammatory nature; while the third to a certain degree combine these plans, instituting moderate evacuations in the first stage; as the first ~~day~~ or second day of the fever, afterwards administer Peruvian bark, wine, laudanum, and tonics ~~for~~ as they say to support the vital powers; a fourth class of practitioners treat the disease with mild aperients, followed by the exhibition of Mercury, in some of its preparations, with a view to excite salivation. The practice suggested by the ~~reason~~ reason that yellow fever is of a putrid nature, and the consequence use of wine, bark laudanum &c is now entirely laid aside by most every physician. Upon this practice Dr Rush in his medical works makes some just strictures, for says he, "if the whole Materia Medica had been ransacked, there could not have been found any three medicines more opposite to this disorder than bark, wine & laudanum." In every case he prescribed bark, it was injurious to the patient, and aggravated the disease. Dr Mosely gives his testimony in regard to the use of laudanum in yellow fever, he says "it is a fatal medicine in this disease" "In one of his patients who took 15 drops to ease a pain in his bowels, delirium set in with death in a few hours" I need not, however produce further arguments, to prove the fatal tendency of this practice; for I am certain that the knowledge which each of you possess of the pathological condition of the various organs affected in the disease, will at once remove any fear in my mind, of your giving such treatment ~~any~~ the least attention.

Yours

From these general remarks I will now proceed particularly to notice the remediate measures employed in the treatment of Yellow fever. The evidences with respect to the advantages of general bloodletting, as before observed, are somewhat contradictory.

Dr Rush's testimony goes in the favour of general bleeding, if moderately done in 1st or 2 day. In the Epidemic at Philadelphia 1793, he conjoined with the Early bleeding, the purgative plan & he says with great success. He thought when the blood letting was done in the 1st day, it frequently strangled the disease, & made the after treatment effectual." He however, does not recommend it indiscriminately; he tries the repetition of the operation and the amount of blood to be drawn, to be regulated by the observation of the physician. In these cases, no doubt, with Dr Rush approximated to some severe complicated resultent fevers, of which I have spoken, as being benefitted by one early general bloodletting — For in Epidemics of yellow fever I have at the same time treated all the varieties of marsh fever, intermittents, remittents & malignant yellow fever, running insensibly into each other and inversely. This may account for Dr Rush's success in this epidemic by the employment of general bloodletting.

Dr Chisholm considers venesection invariably pernicious in those Epidemics of Yellow fever which he met with in the West Indies. But admits that when it is possible to see the sick with yellow fever at the period of its accession, and when the patients are young and robust men from England or some other country, possessing a similar climate, and when the symptoms are unequivocal of an highly inflammatory disposition," then, he says, "one plentiful bleeding, may, undoubtedly, be of infinite service; but when most of these circumstances are absent, I consider the use of the lancet as wanton abuse of confidence and as inevitably destructive to the patient." This observation of Dr Chisholm, gentlemen, may be extended to yellow remittent fever without limitation; for in it the means of unqualified

depletion are fully as pernicious as those of repletation, or those means which serve to augment the vigor & tone of the system. We have important observations upon this point of treatment from Mr Linton who long practiced at the Naval Hospital in Jamaica; he declares to use his expressions "that yellow fever in accordance with his experience both in the West Indies and Gibraltar, was decidedly not inflammatory, though inflammatory symptoms may adventitiously take place; he adopts therefore the expression inflammatio similato, as expressive of irritation or vascular sensibility. He further adds, that the mortality extending back many years was very great from the depleting system; and that the post mortem examinations which occurred to him presented no appearances which could be legitimately assorted to inflammatio

~~Mr Linton's experience & observation fully corroborates the ta detail given to you yesterday & the day before, as results from my own & other autopsies made in the Epidemics described.~~

These views of Mr Linton precisely accord with those which I formed as early as 1819 upon the pathological states of the highly formed yellow fever. Although I have advanced much upon the ~~subject~~ point of blood letting in the treatment of yellow fever, I must omit to call your attention to our talented countryman, Dr Cartwright's experience, which has been ample in this disease and upon the subject of blood letting; he says, if blood letting were resorted to before the developement of general action, which had only yet partially developed itself, abated, the heat which had begun to spread itself over the surface, disappeared; and the pain would subside; and this too, before the quantity of blood taken away was in any considerable degree. Medicine did not operate, and the disease at once passed into the last stage & death. In the congestive or most malignant state of yellow fever he says" During this stage

in vain may we be told to bleed to the relief of the symptoms; for they grow worse and worse while the blood is flowing, and continue to become ~~worse~~ more alarming, and that in proportion to the quantity of blood taken away. Bloodletting, in this stage of the disease, at once, continues this accurate observer, quelled the efforts which the system was making to establish a general reaction. When he distinguished the effects produced by the loss of small quantity of blood, in the first stage of the disease, he waited with confidence to the system to react, as it had been in the habit of doing in other diseases, but, he says, I waited in vain. The disease pursued a similar course to the cold cases - excitement never took place, and death soon followed"
These remarks are quotations from Dr Cartwrights paper & accords with my experience of the effects of general bloodletting in the formidable cases of yellow fever which occurred under my treatment. Gentlemen, notwithstanding the opposition made to general bloodletting in certain varieties of yellow fever, I would not have you to understand, that there are not other conditions which may call imperatively for this operation.
In those forms of the fever, where the ~~conservative~~ recuperative powers of the system or treatment has succeeded in overcoming the entire congestion or suspension of the organic derangements, followed by high & open excitement, full, bounding pulse ~~then I would say bleed~~ with excessive heat of the whole surface, the patient lying naked, and calling on all around him to give him air, I would urge you to bleed copiously, and assist it by plentiful draughts of cold water or ice water etc. The effects produced by general bloodletting in this particular condition, so far from hastening the disease into the last stage and bringing on fatal symptoms, may prevent it from passing into that state, and deprive it of its violence & danger

You will please gentlemen, recollect, that the condition of Yellow fever just described is materially different, from the Congestive forms ~~heretofore detailed~~ mentioned a day or two past; where from the complication of indomitable vomiting, no one article could for an instance be retained upon the stomach. In this condition of the disease, some practitioners employ cupping over the Epigastrium, in hope of affording some relief to the constant and incessant vomiting; but I have preferred dry cupping, where the operation is to be performed at all; but these observations are not to deter you from local abstraction of blood especially where reaction is partial or slowly progressing; for if it becomes established in some measure, and there is too great a determination to the head, epigastrium, cupping leeches, should be employed according to the state of these circumstances.

Regarding the administration of internal remedies in the treatment of Yellow fever, you must here especially ~~[illegible]~~ pay attention to the fact, that they cannot in this fever be given as in almost all other diseases; for in the generality of cases of Yellow fever, the irritability of the stomach is so great that hour after hour, at the period when medicine might be expected to make some impression on the disease, drinks of the mildest kind and medicines of every description, even in the smallest quantity are instantly rejected, I have frequently been present in cases of fever in 1819 Epidemic, where we could administer no one article; we were obliged to ~~[illegible]~~ leave nature to her own resources, in hopes that some opportunity might be embraced that we might commence our remedial measures. turn over

In these conditions Cartwright says he has used Tartar Emetic especially where the action was what he calls ataxic, that is broken, some parts of the body, being cold while the others parts were hot – he says he has given Tartar Emetic with the best effects in this disease.

I have never had any experience with this article, excepting as an Emetic in some of the forming stages of the milder varieties of the fever. His experience is worthy of our attention and I will give you his words "In the first stage of yellow fever, or crippled action, where the blood is unequally determined, the heat unequally diffused, sensation impaired, and secretion suspended, I found no other remedy or combination of remedies which produced such decided effects as tartar Emetic in full doses.

Cartwright found that in this stage, (the ataxic) the effects of the Tartar Emetic were not so soon apparent as in the healthy state of the system, or in less virulent diseases. – Very often, an hour or more after a full dose (vi grs) would be required before the system would appear to feel it. At length, he continues, that peculiar sensation of heat and cold at the same time, would somewhat yeild to a sensation of heat only; the temperature of the skin would become more uniform; and as the excitement was brought out, great distress would ensue and the system would appear to arouse from its torpor, and to regain in some measure its organic sensibility. The nausea, retching and anxiety soon gave way to full vomiting, first of phlegm & then of bile, a full reaction would set in which was managed by careful general treatment – Thus far I present you with Cartwright's own account of his experience with this remedy in one of the most dangerous and unmanageable symptoms associated in yellow fever

~~Dr Cartwright (I must be recollected) gives the tartar Emetic.~~
Dr. Cartwright has an interesting paper upon yellow fever in the 9th volume 2d number of the Medical recorder to which I would refer you for other valuable suggestions in the treatment of this fever.

In Dr. Cartwright's testimony, we have some other observations made on the use of Tartar Emetic in a report drawn by the Commissioners at Santa Cruz in 1819. In the epidemic that raged there in that year, the physicians placed much reliance upon its exhibition in the early stages of the disease. In No 16 of the Gazette of health, Dr Stacket has a paper in which he says at Trinidad, his practice was in almost every stage ~~[illegible]~~ he gave an emetic of Sulphate of Zinc. With the employment of this article, with his other means he had every reason to be satisfied with his success. In classing the remedial measures used by the different practitioners in this fever, I may call your attention to the exhibition of the nitrate of Silver in doses of 4 to 6 grains, so as to act as an emetic. Dr. O'Hallaran remarks that at one time he conceived that he had received considerable advantages in his practice from this remedy; but I may remark here that I have had no experience in these remedies. It is necessary however, I should state these facts to you, and leave you who are anxious to inform yourselves more particularly on the experience of these different gentlemen with the remedies just mentioned to refer you to their papers. Cartwright's Paper on the use of Tartar Emetic in the 9 Vol 1st number of the Medical Recorder. That of the Commissers at Santa Cruz in 1819 in 3d Vol page 120 of the Decados de Hertudo; and Dr O'Hallaran's paper will be found in the Medical & Physical Journal for August 1825.

turn over

In regard to the employment of purgative medicines in the treatment of Yellow fever, there seems to be among the mass of experienced practitioners, an admission as to the propriety of their ~~employ~~ administration, although ~~many~~ the practice has its opponents especially among the followers of Broussais and others of the physiological school, who refer the train of symptoms in this fever as in so many other diseases to inflammation of the gastro intestinal mucous membrane. Under the influence of this supposition of local inflammation, here treatment consists of leeches, gum water, and demulcents, to the exclusion of purgatives. Physicians all agree to its propriety but the differ as to the extent purgation should be carried. I have often stood by the patients, in cases of severe malignant yellow fever, and wondered how in this disease, large doses of ~~severe~~ active purgatives, as Jalap, could have merited the estimation in which they were at one time held, their immediate ejection from the stomach being always so exceedingly probable.

This unquiet state of the stomach has induced us to administer in as small a form as possible small & repeated doses of calomel with sugar, placed dry upon the tongue, and continued till a purgative action was obtained upon the bowels. ~~Again~~ A pleasant way to give the calomel is to sprinkle it slightly upon a tablespoonful of cold water and cautiously swallowed. or the calomel made into a mass, placed between wafers. With this purgative, in this way of exhibition, we shall have a better chance of its being retained than any other form of this class of medicines.

~~But when the stomach~~ Where the calomel and other purgatives, administered are instantly rejected, I have found a drop or two of Croton oil placed upon the tongue to produce its purgative effects; and with much more certainty, than other purgatives ~~when the stomach rejected~~ Not only has the croton oil excited the immediate action of the bowels, without increasing the irritability of the stomach, but it has favoured the secretion of the kidneys, after a total suspension, a point in the treatment of this disease, of essential ~~consequence~~ moment

when you remember how much stress was laid upon this symptom the danger of this symptom, in the Prognosis of this fever.

We have strong evidences published of the value of Croton oil in the treatment of yellow fever. Mr Stackler who practised in an Epidemic of yellow fever at Trinidad. in 1832, gave it in large doses, as well as exhibited it in the form of enemata; for after mentioning the use of Emetics of Sulphate of Zinc, bleeding, warm baths &c. ... and

Yellow Fever – Treatment of the urgent symptom of vomiting

Dr Davidson in the Yellow Fever as it occurred in Martinique – employed injections of a solution of Asafoetida ℥iij to ℥vj water, and the tincture of opium two to three hundred drops – which seldom or never failed in checking the vomiting, however severe – the tincture or solid opium afterward exhibited by mouth prevented a return of this disagreeable & often fatal symptom – but he remarks this remedy did not answer in the first stage of the disease – His practice in this Epidemic of yellow fever was to shave the head at the commencement, to dash the body with pails of cold water, to put them to bed, & give some warm acidulated drink; so as to produce sweat – if costive to give a purgative glyster or Calomel & Jalap – if any return of fevrish heat to repeat the cold ablution or dashing of water, & continue this practice until the inflammatory first stage was over – He then had recourse to Calomel & opium, one to two grains of opium with two to five grains of Calomel, every two hours or longer intervals; which practice was continued, varying the doses of the two medicines according to existing circumstances, until such times as symptoms of mercurial action commenced – & then diminished the dose When salivation commenced he considered the patient out of danger

To prevent vomiting he applied a blister to the pit of the stomach & by keeping the bowels open by costive laxative glysters – When vomiting did occur magnesia in mixture; saline effervescent draughts – Sulphuric Ether in a glass of water slowly swallowed – theriaca applied to pit of stomach – Capsicum in doses 3 or 4 grains – brandy & water – Muller cure; but the best remedy is the one described above Med. Repository Vol II – page 244

Fevers Malignant – Method of treating by friections with oil

Dr Reutsch resident of the Danish Islands of St Croix & St Thomas in the West Indies has discovered a new method & hitherto very successful, of treating the fevers of those Islands, so fatal to Europeans – His process consists of friections by oils – He derived his first idea of this method, from the theory of Dr Scheele of Copenhagen on the use of oil in the Plague – These friections produced evident sweats & always put a stop to the vomiting & sick patients were happily cured from fever in 24 hours. In some cases he joined Camphor with the oil – Med. Repository Vol II

article in Yellow fever, and other diseases, to draw your special attention. A material advantage in the exhibition

when you remember how much stress was laid upon this symptom the danger of this symptom, in the Prognosis of this fever.

We have strong evidences published of the value of Croton oil in the treatment of yellow fever. Mr Stackler who practised in an Epidemic of yellow fever at Trinidad, in 1832, gave it in large doses, as well as exhibited it in the form of enemata; for after mentioning the use of emetics of Sulphate of Zinc, bleeding, warm bath, shower bath & enemata of salts and oil, where there was much excitement, he invariably gave the Croton oil to the extent of 30 or 40 drops, and repeated it thrice through the night. With the exhibition of this medicine, I may remark that the more irritable & distressed the stomach — though, prima facie — to those unacquainted with the febrifuge powers of croton oil in restoring the peristaltic motion of the intestines, which in this fever seems to be inverted altogether, would be a cogent reason for not administering the oil yet in almost all such cases, this agent was found almost invariably successful in abating the deep nausea & retching to vomit, so that in the morning we generally found the patients thus treated quiet with marked approximation to remission.

From my experience the power of croton oil in allaying gastric irritability and general nervous excitement, as well as restoring the congestive state of the internal and deeper seated central vessels, is absolutely extraordinary; and though it may seem for a moment, when first given to increase that irritability, yet after a short time, it seldom fails to produce the desired effect;

As much as we are taught by experience not to be too confident in our expectations of the efficacy of medicines; from the advantages that may seem to result from their employment in particular instances, there is enough to satisfy me in my experience with this article in Yellow fever, and other diseases, to draw your special attention. A material advantage in the exhibition

of the Castor oil, is the smallness of its bulk, its pleasantness to taste, and can be retained in the stomach in cases in which almost every other purgative would be rejected, ~~and therefore is admirably adapted to~~ ~~the relief of~~ The beneficial effects of speedy purging in yellow fever, rest upon strong evidence; for besides my own personal experience we have that of Dr Rush, Jackson, Chisholm, Stacker, Professor Potter, Cartwright and others. ~~adduced~~ They have all adduced testimony of its great value in the treatment of yellow fever. Dr Rush's cathartics were calomel alone & Jalap combined with calomel. ~~The~~ The late Professor Potter of the University of Maryland, in his lectures advocated large repeated doses of calomel in his experience, as a purgative, in the treatment of this fever. We have however, a Dr Bone whose ~~[illegible]~~ valuable researches and conclusions upon black vomit, already submitted to you, adopting an entirely different course of treatment in yellow fever. ~~[illegible]~~ His plan was to exhibit purgative medicines of the saline class — he gave during the first 24 hours — four ounces Rochelle salts with two grams of Tartar emetic — He varied his saline medicines to Seidlitz powders, Cheltenham salts, Tartrate of Soda or Potash tartrates & with these the occasional use of the warm bath; these means were his widest range of practice. That in this practice Dr Bone should have ~~[illegible]~~ displayed sound judgment cannot be doubted, from his extensive experience for many years in the West Indies, and from the remarkable tact which he has displayed on many practical points connected with yellow fever. How far this practice may be attributed to ~~the~~ his views of the primary alteration of the vital properties of the blood by the morbid influence of the cause of the fever, destroying the saline principles of the blood, thus rendering it vapid and unfit to stimulate the organic functions, the views lately promulgated by Dr Stevens is impossible to say; for the principle of the immediate action of neutral salts on the blood, is still involved in obscurity. But whether in

in reference to the exhibition of small doses of neutral or non purgative salts as advocated by Dr Bone, or to the popular remedies long used as large doses of the super tartrate of potassa, olive oil or Castor oil; remedies very commonly employed by the common people in the West Indies), the difficulty, gentlemen, will always present itself as to these means being generally applicable in a disease, like yellow fever, where the excessive irritability of the stomach forms some prominent & troublesome character. I have had considerable experience in mild cases of yellow fever, bordering on that of remittent, after depletion, when necessary, and proper purgation was effected; instead of the administration of salivant doses of Mercury, as I was taught in the future treatment, in these cases, I have found the non-purgative saline to accomplish, with occasional mild aperients, the rapid restoration of the patient. Those which I have presented, and at present with practitioners of this city, in our continued Bilious fevers pretty general employed, is in a combination of ℥i of super carbonate of Soda with ℥ss chlorate of Potassa in six ounces of water – One tablespoonful every four hours. Where there is a disposition to Typhoid tendency in continued fever, the deterioration of the mass of blood, is most unquestionably prevented by this solution, and thus a due influence is exerted upon its vital properties to the maintenance of a proper & necessary stimulus upon the organic functions. While employing this solution, proper attention should be kept to inflammatory complications, which are apt to arise through any period of the fever, and which should be promptly met by local abstraction of blood or counter irritation.

As auxiliaries in the treatment of yellow fever I should not omit to remind you that Enemata are generally had recourse to; of these you have tried salt & water; Molasses, Castor oil & Indian meal gruel; In the West Indies and other places, a proportion of oil of turpentine has been used with other materials. In your selection even here, you must be governed by the therapeutical intentions you have in view.

Gentlemen, — So far in my review of the treatment of the different modifications of Yellow remitting fever, I have purposely omitted the special notice of the mercurial plan; that I might call your attention more directly to it. It would appear from an examination of all those authorities who have published their observations & experience of this fever, that the treatment, I am about to examine has more generally maintained its ground; for though it may be admitted that it has from time to time fallen into disuse from practitioners having, in the course of an epidemic, frequently found that, lete all other remedrate measures, it made no impression on the most aggravated forms of the fever; it nevertheleß has, we must own, a stronger testimony in its favour than any other mode of practice. Dr Chisholm was the first, according to ~~recd~~ medical record, who introduce the plan of affecting the system with mercury as soon as possible in the treatment of yellow fever. Dr Chisholms account is, that he administered the Calomel with a view to its influence on the constitution; but it is obvious that, the quantity in which he employed it, it must act as a considerable purgative in generality of Cases. His ~~usual~~ dose of Calomel was ten grains, either alone, or combined 10 or 20 grains of powdered Salap to a person as soon as he visited him. This powder generally acted as an evacuant in the degree required, about one or two hours after its exhibition. At the end of three hours, he repeats the dose of Calomel; and at the end of another three hours, he gives a third dose of the Calomel; to which he added opium or not, as the proceeding doses had acted. In this manner & from these doses he tells us, the salivary glands became affected in 24 hours from the commencement of the treatment. In Dr Chisholm's experience with ~~from~~ this remedy, its effects were generally perceivable

perceivable after the third dose; the patient becoming calmer, less restless; less anxious; his skin being softer, and less effected of an agreeable heat; the stomach being perfectly retentive; however irritable it might have been before; and the eyes recovering their former lustre and sensibility - When salivation took place his patient was left free from disease, with a moderate warm moisture on his skin, and very soon after signs of returning health were indicated by calls for food &c. These cases of Dr C were evidently, as you must have noticed in the detail, but mild cases of Yellow fever, without many serious complications; and more properly may be classed as aggravated cases of remittent fever; and thus the action of mercury was so readily and easily had & the restoration to healthful function so soon accomplished. Indeed, Dr Chisholm, candidly observes that he witnessed circumstances, in which the utmost difficulty was experienced in obtaining the constitutional effects from calomel; and again, I will tell you there are other circumstances which every experience & candid practitioner must own its insufficiency.

Our Countryman Dr Rush, after the publication of Dr Chisholm's experience with Calomel employed in his cases of Yellow fever in the Epidemics at Philadelphia in 1794, 95, & 1797, so as to produce salivation, and he is almost as enthusiastic in its praise as that gentleman himself. Dr Rush says he endeavoured to excite salivation early in all those cases which did not yeild immediately to bleeding and purging. I was delighted he says with its effects in every case which I used it — He then describes its effects, similar in every respect to the effects just detailed as given by Dr Chisholm. My hour has so far expired, that I shall not have time to enter more fully in Dr Rush's experience of this agent; but will refer you to his Medical Inquiries & Observations Vol IV page 93 & Vol V. page 117. His works have out of print, but those of you who thirst for valuable facts in your science, should not only read but study his writings.

Numerous other evidences abound in the publications upon the subject of Yellow fever of the advantages of mercury in the treatment of this fever. Besides Rush, Chisholm, Mr Linton, Dr Arthur, Callow and others we have the experience of Dr Francis of New York in the Epidemic of 1822. In this Epidemic Mercury was considered as conspicuous among the curative means. It is scarcely possible for me to name a British writer upon Yellow fever whose views of the treatment of yellow fever with mercury, do not accord more or less with those which I have laid before you. But many of them admit, as all must, that in many cases the resources of our art have little influence on the disease; and that in its worst forms it is utterly beyond controul. Indeed, gentlemen, it is not permitted us to be too sanguine as to the efficacy of any remedy in even a seemingly mild case of this Proteiform perfidious disease; and the specific action of Mercury, even after purging, bleeding etc, baths and aperients, will often fail to take place; the torpor of the absorbents being totally insurmountable; but as in an infinity of cases we can have no right to assume that this is the case, it must rest with the judgment which you may form, to decide how far you may be warranted in withholding a remedy standing so important (as does Mercury) from various quarters.

Previous, however, to dismissing the subject of the exhibition of Mercury in Yellow fever as a salivant, it may be well to present you with the remarks of ~~[illegible]~~ Dr McIntosh & our countryman Dr Cartwright. McIntosh says "Some practitioners trust almost exclusively to the action of Mercury in the treatment of Yellow fever, and in India particularly, it is deeply to be regretted that a great waste of human life has consequently taken place. Some years ago Dr Holliday, of the Hon.d East India Comp. service, was by order of the Marquis of Hastings

put under arrest, and deprived of rank and pay, for showing, by most incontrovertible evidence, that in the General Hospital at Calcutta, the enormous quantity of 26 pounds of Calomel was consumed by 8816 patients; and that under the digestion the proportions of death was one 6 3/4 of the whole sick list — whilst under a more rational treatment the mortality was reduced about one half; in fact, the mortality bore almost an exact ratio with the quantity of Calomel exhibited. The result of the practice of the rising medical officers in India has fully corroborated the statements formerly made by Dr Holliday; and mercury is not now so much abused as it once was. And as pathological knowledge advances in India, which it is doing rapidly, mercury will still be less trusted to. Dr Cartwright in speaking of the use of mercury in the Epidemic Yellow fever of 1828 at Naches, affirms that given in the first stage of the fever, in by far the majority of cases, it produced no evident effect on the system, and consequently none on the disease. Sometimes, however, even in this stage, it produced salivation or ptyalism, yet such ptyalism had little or no effect in arresting the progress of the disease. He says he has seen many patients die whose mouths became sore early by one or two doses of Calomel, as he ever saw recover. — My own observation presents me with instances of death in this fever after accidental ptyalism — If mercurial preparations were had recourse to in the second stage, after the system was reduced by the lancet, or by any other means, they often brought on ptyalism — such ptyalism was attended with a soft state of skin, pulse, with a free secretion of bile and urine, and with a return of the organic sensibility of the whole system. With such a ptyalism, gentlemen, no patient ~~[illegible]~~ dies in yellow or bilious remitting fever. But if the reaction of the second stage of the fever be not reduced by appropriate treatment, and has not had time to run itself down, mercury in such a state of the system,

especially in the form of Calomel with opium, often produces a blackness of the gums, succeeded by sloughing that lays bare the alveolar process at different points, and which is accompanied with a partial oozing of blood, to the amount of a quart or more in 24 hours; and a dryness of the fauces of the fauces take place, untill either the hemorrhage or ptyalism return. Under such effects of Mercury it is very difficult to rally all the stimulants, tonics, astringents, detergent gargles, blisters & laxatives, to save the patients. They continue to die or sink of about the 20th day from the attack, apparently from exhaustion produced by the skill drain of blood from the gums.

I have thus, gentlemen, given you the arguments pro and con, for & against the employment of Mercury in yellow fever, with no more of commentary than my own experience, and send you to your studies to make out your own verdict, that you may return it, when you come to have experience in the treatment of the multitudinous forms of this disease.

From these considerations I shall pass on to notice some other remedial agents used in the treatment of this disease. Among these cold bathing, or affusions of cold water upon the skin in the hot stage of yellow fever, this has been found highly useful by Drs Currie & Rush & in my own practice. Dr Jackson prefers the external application of water viz by a succession of alternate warm & cold bathing — the patient being first immersed in a warm bath & then removed, while the sensation of heat is still upon him, a bucket of cold water is thrown over the naked body. This should be done, after bloodletting where required & may be performed during the action of purgatives. But be careful not to employ the cold bath or affusions in the cold or congestive or ataxic action of the system, as its effects might be fatal. This remedy is prejudicial

in all ~~cases~~ acute diseases in which a general and equable excitement is not evolved. Where there is reaction & high excitement, cold water affusions, diminishes the frequency of the pulse, and in one instance where I used this application, with full, bounding & frequent pulse, the application of the cold affusion reduced its frequency 24 beats in a minute. The warm bath in the congestive or ataxic forms, offers ~~a~~ the best assistance in restoring the natural sensibility and enables the skin to take on a proper secretory action

With regard to the application of blisters in the treatment of yellow fever there is a contradiction of sentiment among practitioners as to their use in our climate in fevers in general.

Dr Cartwright & Chisholm both upon their own observation and the testimony of others, affirm that blisters were never of any use at any period of the disease, or to whatever part of the body they were applied, not even in relieving head-ache, or other local injury. Dr Cartwright condems ~~the~~ the use of blisters unreservedly in any condition of yellow fever. I have never much employed them in this particular variety of fever; but I am satisfied in the more mild remitting types of the disease, when the time is properly chosen, they become of great value in withdrawing irritation from internal organs, by their action upon the skin & serous tissues. Dr. Rush & Lind considers them of great service when applied to any part of the body, but particularly to the crown of the head, in brain complications of the fever. ~~Dr Rush~~ however, limits their good effects to a particular juncture, which he calls the blistering point, and which, in bilious fevers, is generally circumscribed within Eight & 40 hours; for to use his words "When applied after that action has nearly ceased, they do little or no service. In cases of profuse hæmorrhage

which frequently occur in yellow fever, the stomach is usually more retentive, and in these cases I have employed a bitter infusion with a proportion of Sulphuric acid with advantage.

In some cases the bleeding from the mouth & gums is so excessive, as to excite great apprehensions for the life of the patient - I made mention of a sister of mine who bled some days in ~~such~~ large quantities; yet she was sustained by bitter vegetable infusions with Sulphuric acid & the hæmorhage finally ceased by a wash of nitrous acid & water - Creasote, and muriated tinct of iron externally, may be expected to do good ~~[illegible]~~ in this symptom. Nitrate of Silver applied freely to the gums or parts from whence the blood flows would in some cases arrest it. In this stage of the disease every hope may be expected, if circumstances admit of proper and incessant nursing, with the frequent supply in small quantities of nourishing food, as sago, arrowroot, panado, broths and occasionally porter or good dry sherry Madeira wine. The occasional employment of diaphoretics, diuretics, stimulants &c call for no particular remark — When the symptom of remarkable "burning sensation in the Œsophagus & pharynx ~~from~~ extending from the stomach", described in the symptomatology of the disease"; when this distressing symptom is present, calcined magnesia & prepared chalk we have found to afford the most relief in such cases, just the same as ~~[illegible]~~ we have lately observed to relieve, sometimes, this same sensation in cholera. You are to enjoin great watchfulness upon your attendants to your patients in the advanced stages of this fever, in which there ~~is~~ is great exhaustion, which has been produced by incessant vomiting & want of sleep; a moderate dose of opium & capsicum in minutely divided pills, has to our observation, produced a better effect than any other medicines

In the convalescence ~~from~~ the generality of the cases of Yellow fever, no other tonic is necessary than a nourishing

and gently stimulating
diet, and change of air — During the continuance of the disease, you will be frequently importuned to tell what drinks are necessary for the patients; cold water, tamarind water, toast water, weak spruce beer in small quantities have appeared grateful to the palate of the patient, or a mixture of the white of an egg, sugar & water and some aromatic will be well received. In directions for the diet of the patient, you may be asked how they are made. And here very frequently a physician in large experience is mortified in not being able how to direct the differences between Chicken Tea & Chicken broth — These little matters should be known by every practitioner of Medicine & to you gentlemen, let not one gentleman upon the practise medicine without adding to your library, the important & useful work of Anthony Todd Thompson on the Sick room —

Again, gentlemen, you are not to forget in your visits to govern the apartments of your patient. Ample directions were given you when treating of the treatment of Continued fever; and in yellow fever cases the temperature of the apartment demands particular attention — From what we have seen useful in other fevers, those unacquainted with the peculiarities of the yellow fever, are very apt to err on the side of over ventilation, whereby, in some of its forms and stages, the vital energies are liable to be lowered perhaps to an irretrievable degree in an inconceivable short space of time; hence we found in one of our epidemics in this city that tents, or slightly constructed huts in which the sick were removed were always objectionable.

The convalescence from Yellow fever is generally rapid; but in some cases it is very slow. As long as a

a patient remained in the room in which he was sick or the place in which he contracted the disease, I have remarked that although the symptoms of the disease had disappeared, the progress of the recovery was remarkable slow; and more especially when tonics were employed. A change of air & situation becomes advisable from the moment of convalescence taking place; and the purer the atmosphere, and the more elevated the situation to which we can remove the patient the more rapid will be the recovery and a consequent acquisition of his strength. I have thus said all that is of moment in relation to yellow fever; the next & final part of the subject would be the prevention of the disease. This, of course, will be effected by the removal of all sources of poison, and strict attention to cleanliness; indeed the word cleanliness will embrace every other consideration, and which if it be properly attended to, the disease will certainly be staid or disarmed in a great measure of its violence & fatality.

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